

# Investigating the Role of Environmental Costs in Supporting Supply Chain to Build Competitive Advantage

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**Abstract-** Each organization requires three important sources of human resources, financial resources and natural resources to carry out its activities. Given the importance of environmental costs, they can be considered as part of the cost of products or services of business units. The purpose of this paper is to examine the role of environmental costs in supporting supply chain to build competitive advantage. The results of the survey showed that reporting environmental costs could have many benefits for companies because this makes it possible for companies to do their best to do their best and increase their credibility with customers and the entire community. In this way, the calculation of environmental costs plays a role in supply chain to build competitive advantage for companies.

**Keywords:** *Environment, Competitive Advantage, Supply Chain.*

## 1. Introduction

Today, due to the industrial and technological progress, the role and impact of human societies on the environment has increased. The above issue is necessary to develop various methods and models with the aim of studying these works and also explaining the interactions between human and the environment. According to some scientific theories, human beings have become a species of animal that has become distinct and evolved through the natural selection mechanism. Therefore, environmental changes can affect humans as well as other animal species [1]. Each organization needs to use three important sources of human resources, resources, and natural resources to carry out its activities. Considering the importance of environmental costs in supporting supply chain to build competitive advantages, they can be considered as part of the cost of products or services of business units. Therefore, the failure to report such costs in the financial statements will lead, firstly, to the hidden costs of the environmental management, and do not take the necessary steps to control them. Secondly, the failure to report environmental costs in supporting supply chain to build competitive advantages as part of the cost leads to a distortion of the most important quality of accounting information, that is, their

dependability. The importance of the role of the environment in economic activities as well as the welfare of human societies has led the issue of the simultaneous integration of environmental issues and economic issues into an integrated accounting system in recent years in many economists.

On the one hand, the lack of natural resources threatens economic efficiency and, on the other hand, increases the economic output and consumption activities by increasing the production of pollutants, causing serious damage to the quality of the environment, therefore, it appears that the common national accounts, and especially the GDP index, which, as the most important indicator of economic growth, are indicative of the economic growth of countries, is a mistake for policymakers. The reason for this is the lack of consideration of individual and collective costs of using natural resources as well as damage to the environment and this puts society at the ultimate path to unsustainable development. In fact, the entry of the environment into the accounting system leads to the reform of the economic indicators, which enables policymakers and planners to make decisions that support sustainable development. Environmental accounting or green accounting is looking to move firms and push them towards clarifying the environmental aspects of the activities of all businesses. Adoption of the basic principles of accounting for the petty portrays the role of the environment in the economy and facilitates analyzing macroeconomic questions with the help of accounting information systems, thus leading the economy to the proper direction of growth and development [2]. On the other hand, gaining competitive advantage is the basis of the activities of strategic executives [3]; but with extreme environmental changes, it's very difficult to maintain corporate excellence than competitors [4]. Therefore, it is easy to calculate environmental costs in order to reduce costs, in turn, can be effective in gaining competitive advantage for organizations. But this needs to be addressed and the question arises as to which environmental costs play a role in supporting supply chain to build competitive advantage? The purpose of this article is to review the previous research and to answer the question.

## 2. Backgrounds of the environmental topics debate in the economy

Today's articles of the environment have become very important in every country's economy. As in the economic literature, the ecological economics or the environmental economy are considered simultaneously with addressing economic growth and development. This approach to economics examines the interactions between economic and ecological systems, environmental topics debate into economics within the context of a historical debate since Malthus's concerns about the supply of agricultural land along with the growing population has occurred and has paid attention to the environment in classical economics. In the 1950s and 1960s, although economists did not pay much attention to the environment in keeping with economic growth theories, in the early 1970s, neoclassical economics, with the view that each economic system is a subsystem of the environmental system, began to re-focus on the environment. Therefore, the economy depends on the environment, what is happening in the economy, it affects the environment, and environmental change also affects the economy. Hence, economics and the environment are two systems that are dependent on each other. Attention to the environment at the same time, due to the economic growth and development of the countries, led to the introduction of sustainability issues in the literature on economic development.

The basis for this was based on the report "Our Common Future" in 1987 by the World Commission on the Environment and Development (WCED). The report also discusses the extent of poverty and the various threats that make sustainability riskier. The report argues that the economic growth needed to cope with poverty should not lead to further economic problems in the future, with its negative impact on the environment. According to the report, what is needed is a new kind of economic growth that has had little impact on the environment and, instead of endangering the threat, will increase the capacity of a common economic-environmental system to meet human needs. Accordingly, sustainable development refers to a particular kind of economic growth that provides the needs of the current generation without sacrificing the capacity of the economic-environmental system to meet future needs. Therefore, we can say that the knowledge of "environmental economics" is in fact a science that helps to develop and sustainably exploit natural resources and examines how to manage and develop environmental resources. This science strives to advance human and technological development and socio-economic development in achieving sustainable development and environmental considerations. Accordingly, one of the most important requirements for achieving sustainable development is the sustainable economic system. This economic system should, as long as the use of natural resources as a positive factor in calculating, see GDP. It should consider the costs of exploitation and destruction caused by the use of these resources as a factor in reducing gross domestic product [6]. In general, in a

human society, the scale of economic activity determines the rate of discharge of natural resources and determines the rate of production of gases and wastes. Equally important is the combination of economic products and techniques used in production. If, along with economic growth, there is a change in the structure of the global economy, as well as refining technology, protecting and protecting resources, replacing more polluting technologies and resources, in that case, without incurring threats to the inalienable aspects of human well-being, continuous growth can provide higher standards of material life.

## 3. Previous Research

[5] explores the role of environmental cost accounting in achieving sustainable development goals by examining the greenhouse gas and SEEA system and its role in achieving the goals of sustainable development. The results of his research showed that calculation of GDP per capita and application of the system of environmental and economic accounts (SEEA) by drawing a real picture of the economies of countries, politicians help politicians better manage resources (especially natural resources), because many politicians do not have the ability to understand the potential environmental effects of events, and so they reminiscent of environmental issues in their decisions. [6] in a research entitled "The Role of Dynamic Potential in supply chain to Create Competitive Advantage" examines the dynamic capabilities and its impact on creating competitive advantages. The results of this study showed that dynamic capabilities have an impact on competitive advantages such as product differentiation and service delivery [7].

[8] has studied the environmental accounting, its location, costing, applications and the necessity of its existence in a study entitled "Understanding Environmental Accounting and Its Role in Evaluating Environmental Costs in supporting supply chain to build competitive advantages." The results of his research showed that the accounting information system can be a major component of the management information system, and has a major role in helping protect the environment from polluting manufacturing companies. As a result, the use of environmental accounting is an effort to protect the environment. Makkonen et al. reviewed the impact of dynamic capabilities on firm performance in a post-2008 financial crisis. He considers constant environmental assessment, the creation of knowledge (with emphasis on research and development knowledge), the integration of knowledge created in enterprise processes and products, re-configuration, employee learning, and the leverage of human resource capabilities as dynamic potentials. His analysis shows that dynamic capabilities make changes to the organization, acceptance of changes in the organization leads to higher performance of innovation and performance. Innovation makes it more in keeping with the organization's external environment [9].

#### 4. Research Methodology

As stated in the introduction, the current research approach is a review of previous research. Therefore, the descriptive-library research method has been selected.

#### 5. Discussion and Conclusion

##### 5.1. Discussion

Evaluating the effects of industries and organizations on the environment. According to the above, measuring and measuring the effects of the activities of manufacturing companies on the environment is important and therefore it is necessary to use measuring instruments that are appropriate to the subject matter to be measured. For example, using the Metro to measure distances and use minutes and hours to measure time is recommended. Accounting information is considered to be the most efficient unit of measurement in economic and commercial matters, so that accounting becomes a loss to business. The quantitative information reported by the accounting department has a significant role in understanding and evaluating the company's performance, the performance of managers (especially financial managers), environmental related costs, and the like. In the formulation of traditional accounting systems, measures such as measuring and reporting environmental costs are not included, so the system does not have the necessary efficiency to incur such costs. Many analysts believe that changes to current accounting systems are needed to measure and report environmental costs in supporting supply chain to build competitive advantages. But these changes are subject to limitations. Among the limitations in this area is the lack of specific standards for measuring and reporting environmental costs in supporting supply chain to build competitive advantages. For example, although some companies disclose environmental costs in their annual financial reports, this has not been done comprehensively among all companies and therefore, the reports provided have the coherence and comparability necessary. Although the IASB<sup>1</sup> has issued laws on carbon dioxide emissions reporting [10], the main problem in this area is the lack of clear and comprehensive standards for reporting on environmental costs in supporting supply chain to build competitive advantages. Some of the most important reasons behind the ineffectiveness of the traditional accounting system for reporting environmental costs are as follows:

- ❖ The purpose of the traditional accounting system, which earns profit and maximizes the value of a capital concentration company, is consistent with the objective of environmental reporting.
- ❖ The environment is like a public good belonging to all people in a community, so nobody can claim to own a monopoly on it. In

the traditional accounting system, only expenditures are identified that have tangible economic benefits. Since environmental costs do not lead to the possession of certain assets, they are subject to ambiguity in their traditional accounting practices.

- ❖ Environmental costs will benefit the company and society by improving the environmental conditions. Measuring and reporting the amount of these benefits in financial statements is unlikely due to the inefficiency of the traditional accounting system. However, these benefits are not reliable on the Rial, but due to its importance to society (under the name of the green industry), it increases the company's stock market value. Due to the difficulty of measuring the results of environmental costs in supporting supply chain to build competitive advantages, companies are only motivated. Environmental costs are included in the notes to the financial statements. Therefore, because of the failure to report the benefits, the appropriate disclosure is difficult.
- ❖ In the traditional accounting system, earning profit is permissible in any way and in any way. In other words, in this system, actions such as wild regeneration of trees, destruction of natural habitats, and air pollution in the profit-making process are possible. The above question contributes to the contrast between the attitude of traditional accounting theory and the environmental accounting attitude. The limitations and inadequacies of the current accounting system in measuring and reporting environmental costs have led to the emergence of a new branch in accounting, called environmental accounting. The environmental accounting is a branch of accounting whose task is to identify, collect, classify, diagnose, report, and interpret information on environmental costs, as well as to include this information in related calculations, to the cost of goods and services.

##### 5.2. The Benefits of Exposing Environmental Costs in Supporting Supply Chain to Build Competitive Advantages

Environmental information reporting can be taken from a variety of aspects, with many benefits to the company, most notably as follows: The community has a positive attitude towards companies that disclose their environmental costs in supporting supply chain to build competitive advantages, and so these companies are less likely to be pressured or litigated by environmental protection associations. Companies provide environmental pollution reporting to reduce pollution and environmental degradation. Companies that identify and report environmental information are usually optimally used by natural resources. Therefore, their use of environmental resources will be much lower than that of other companies [11], [12].

## 6. Conclusion

Environmental reporting can bring many benefits to companies. This makes it possible for companies to do their best in social responsibility and increase their credibility to customers and the entire community. Thus, environmental costs play a role in supply chain to build competitive advantage of companies. Although actions have been taken by professional accounting c lk, mnolleges in different countries, these measures have not been sufficient and have not been able to provide a good way to reduce and control environmental costs. Considering that there is still no serious belief in the acceptance of social responsibility among Iranian manufacturing companies, these companies, in order to increase their profitability, bring in irreparable damage to the environment [13].

## References

- [1] Michael, J.J. "Accounting for the environment: Towards a theoretical perspective for environmental accounting and reporting", *Accounting Forum*, Vol 34, pp. 123-138, 2010.
- [2] Mohammad Bagheri, A. "The role of environmental costs calculation in achieving the goals of sustainable development, Iranian National Conference on Environment and Energy", Kharazmi International Institute for Educational and Research, Shiraz, 2014.
- [3] Helfat, C.E., & Peteraf, M.A. "Understanding dynamic capabilities: Progress along a developmental path", *Strategic Organization*, Vol 7, pp. 91-102, 2009.
- [4] D'Aveni, R.A., Dagnino, G.B., & Smith, K.G. "The age of temporary advantage", *Strategic Management Journal*, Vol 31, No. 13, pp. 1371-1385, 2010.
- [5] Zare, I., Shafiei, A. "Review of the role of Green Accounting in Environmental Protection", 5th National Conference on Geology and Environment, 2010.
- [6] Moinnejad, B. "Knowledge of Environmental Accounting and Its Role in Environmental Cost Assessment", 5th Environmental Engineering Conference, 2011.
- [7] Akbari, M., Esmaeilzadeh, M. "The Role of Dynamic Potential in Creating Competitive Advantage", *Quarterly Journal of Business Management Outlook*, No. 15, pp. 127-144, 2013.
- [8] Moinnejad, B. "Knowledge of Environmental Accounting and Its Role in Environmental Cost Examination", 5th Specialized Conference on Environmental Engineering, Tehran, University of Tehran, Faculty of Environment, 2011.
- [9] Makkonen, H., Pohjola, M., Olkkonen, R., and Koponen, A. "Dynamic capabilities and firm performance in a financial crisis", *Journal of Business Research*, 2013. <http://dx.doi.org/10.1016/j.jbusres.2013.03.020>.
- [10] Anthony G. "Accounting and the environment, Accounting", *Organizations and Society*, Vol 34, pp. 433-439, 2009.
- [11] Kathleen, H. "A full cost environmental accounting experiment, Accounting", *Organizations and Society*, No. 30, pp. 519-536, 2005.
- [12] Walker, B., Bovet, D., and Martha, J. "Unlocking the supply chain to build competitive advantage," *The International Journal of Logistics Management*, Vol. 11, No. 2, pp. 1-8, 2000.
- [13] Mentzer, J.T. *Fundamentals of supply chain management: twelve drivers of competitive advantage*. Sage, 2004.